Diagnostic analyzer

ScopeTester 5

User manual

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Registration

If you want to receive free updates for ScopeTester 5– register by sending us the following data:

1. company name
2. address
3. phone number

at the registration e-mail: *scopetester@auto-testers.com*. Use this address also if you have any technical questions about the ScopeTester 5.

1. Introduction

ScopeTester 5 diagnostic analyzer is five channel oscilloscope tester for PC computers. Contrary to ordinary oscilloscopes, ScopeTester 5 enables continuous recording of waveforms (no dead time) which gives remarkable diagnostic capabilities. Available volage ranges are suitable for typical vehicle circuits. ScopeTester can be used to diagnose both sensors and actuators. It can also be used with other accessories such as current clamps, special diagnostic sensors and others.

2. Device specifications

Supply voltage:	5V DC (powered directly from USB, does not require power supply)
Operating conditions:	temp. 0 – 50°C
Ranges (Channels 1 i 2):	-1,25..1,25V; -2,5..2,5V, -5..5V, -10..10V, 0..5V, 0..20V
Ranges (Channels 3, 4, 5):	0..5V, 0..20V
Voltage measurement accuracy	1%

3. Software installation

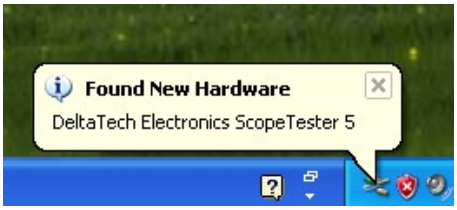
After inserting the CD into the drive the installation program window should appear (if not, run *Start.exe* from the CD-ROM).

Click 'Install' button to run the installer. Please follow the instructions on the screen – accept the license agreement, select destination folder and specify whether you want to create desktop icon. To go to the next step click ***Next***.

The successful installation is confirmed by the message.

3.1 Driver installation (Windows 2000/XP)

The driver installation procedure is shown for Windows XP.
After connecting the device to the USB port you should see the following notification:

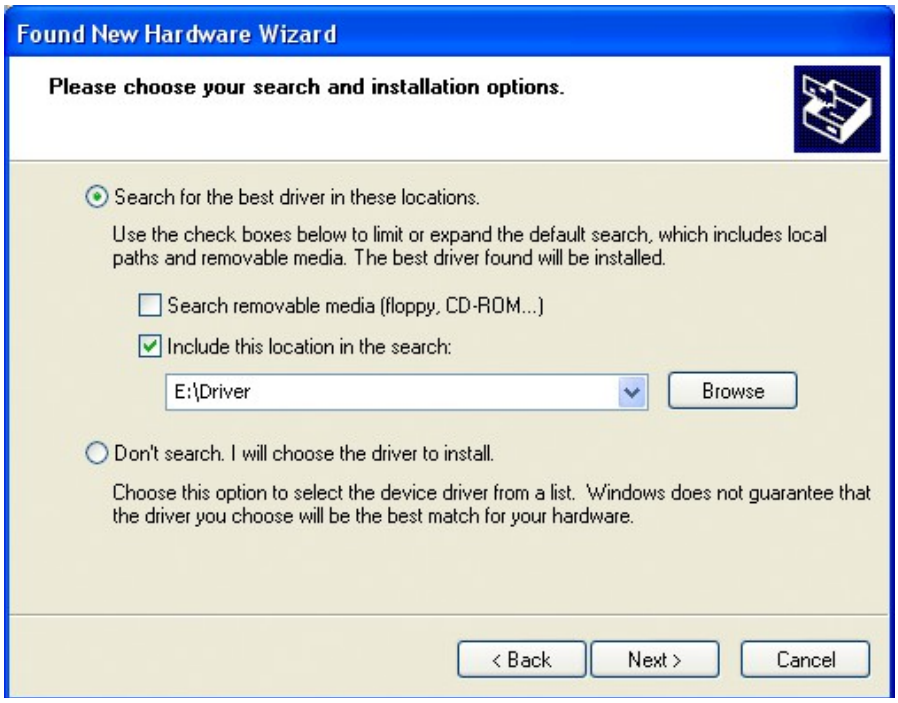


Then the window will display:

Select *No, not this time* and click *Next*
In the next step specify the driver location:

Select *Install from a list or specific location (Advanced)* and click *Next*.

Then choose the driver source path:



After clicking *Browse* select *Driver* folder on the CD-ROM (drive letter may differ). Then, click *Next*.

The system will display warning on installed software:

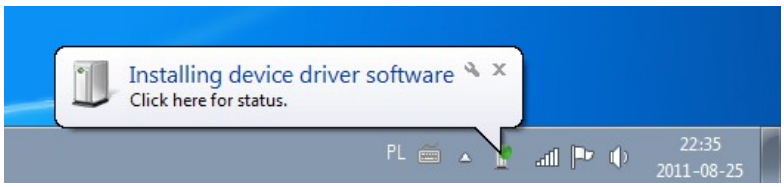
Click *Continue Anyway* to install the driver.

After successful installation an information should appear on the screen:

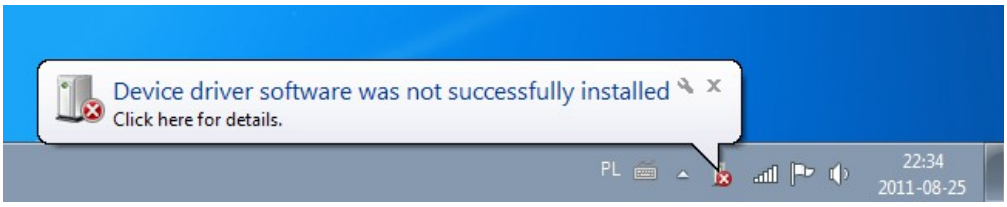
3.2 Driver installation (Windows 7/Vista)

Warning!
Users of 64-bit versions of Windows should make additional step before proceeding. Restart system and press F8 ahead of system loading begins. On the list that should appear select *Disable Driver Signature Enforcement* and press ENTER. Then perform the following steps just as in case of 32-bit version of operating system.

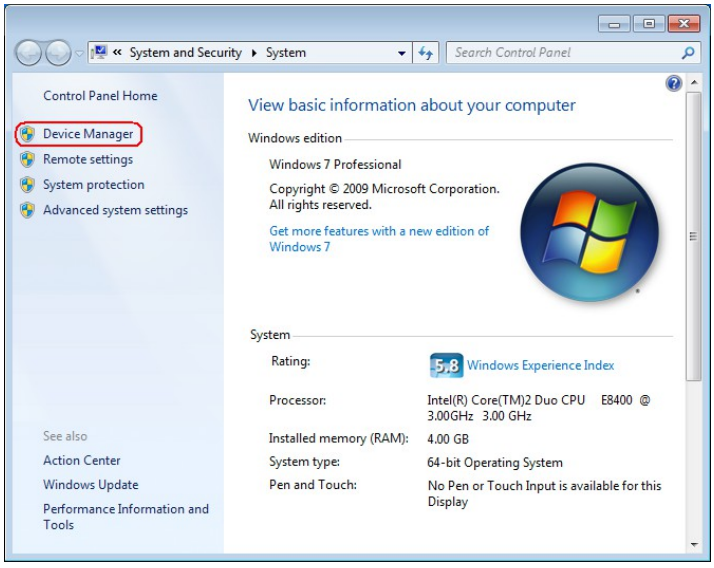
Connect the device to the USB port. Notification will appear in the lower right corner of the screen.



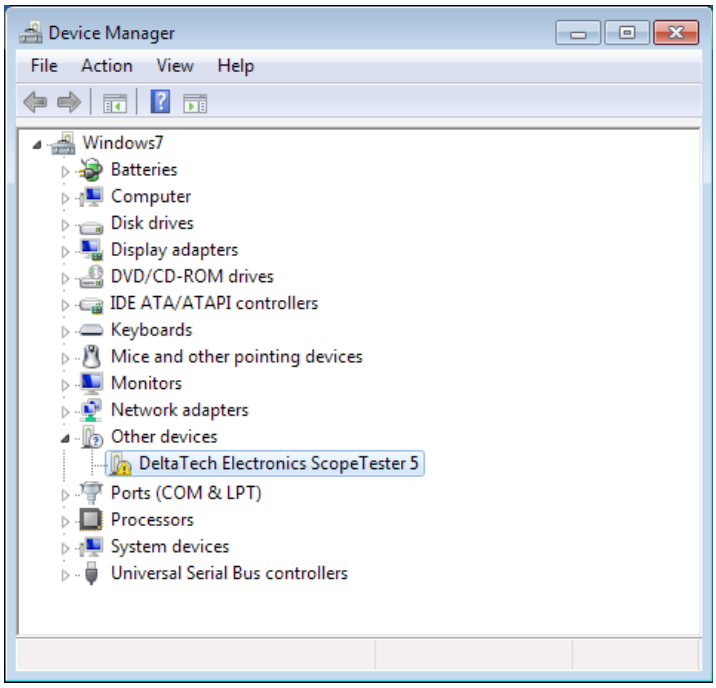
After a while the warning will display as the driver will not install automatically:



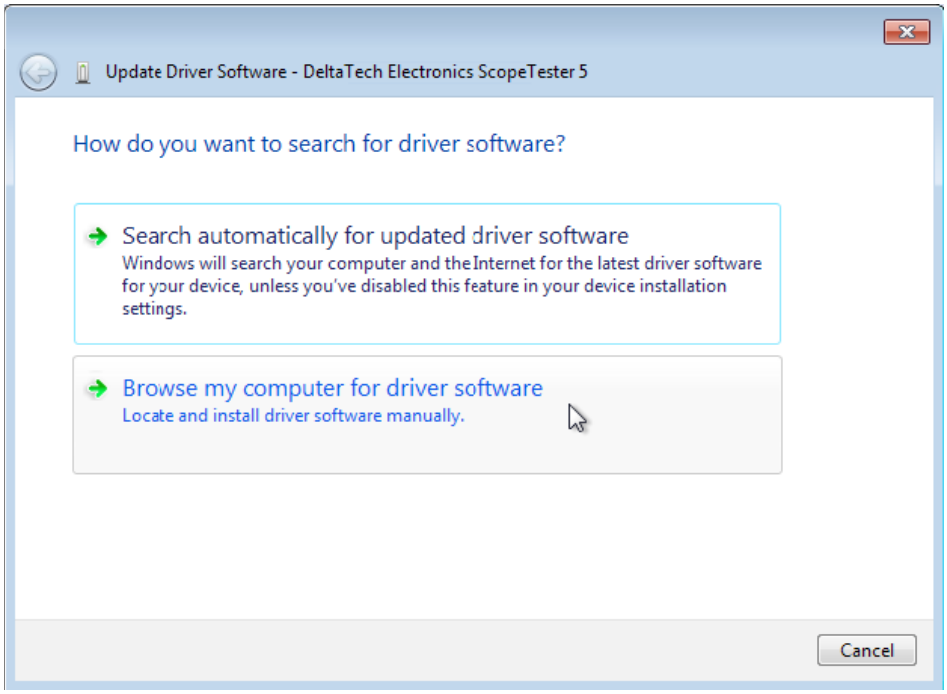
Right-click the *Computer*.



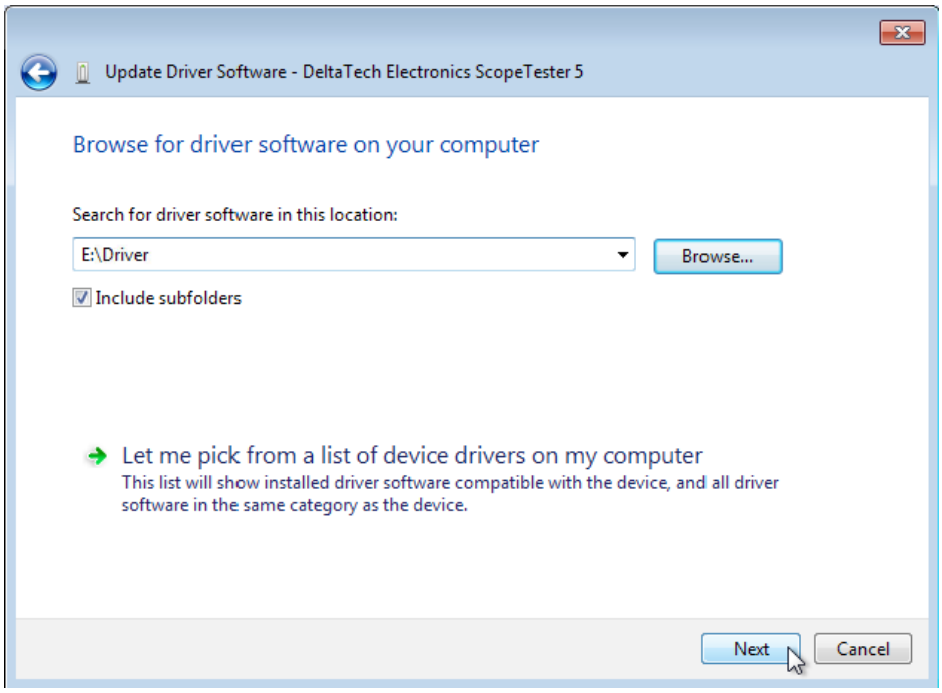
Click *Device manager*, this will invoke the list of devices. Among others there should be *DeltaTech Electronics ScopeTester 5* on the list.



Right-click *DeltaTech Electronics ScopeTester 5* and select *Update device driver* from the pop-up menu. The following window will appear:

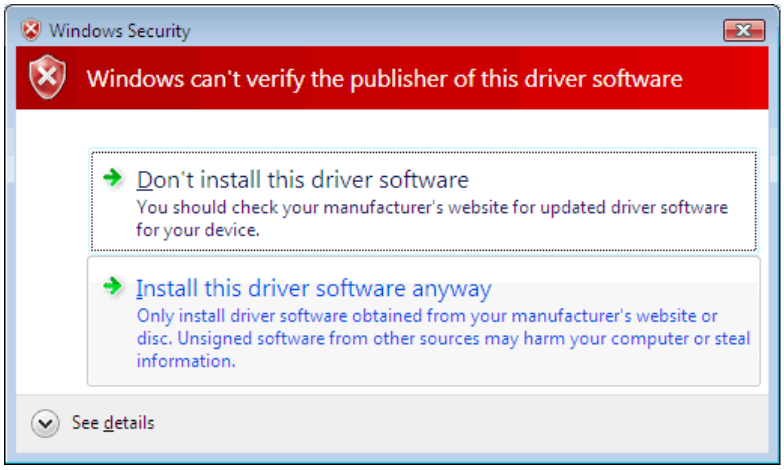


Choose *Browse my computer for driver software* and specify the driver path:



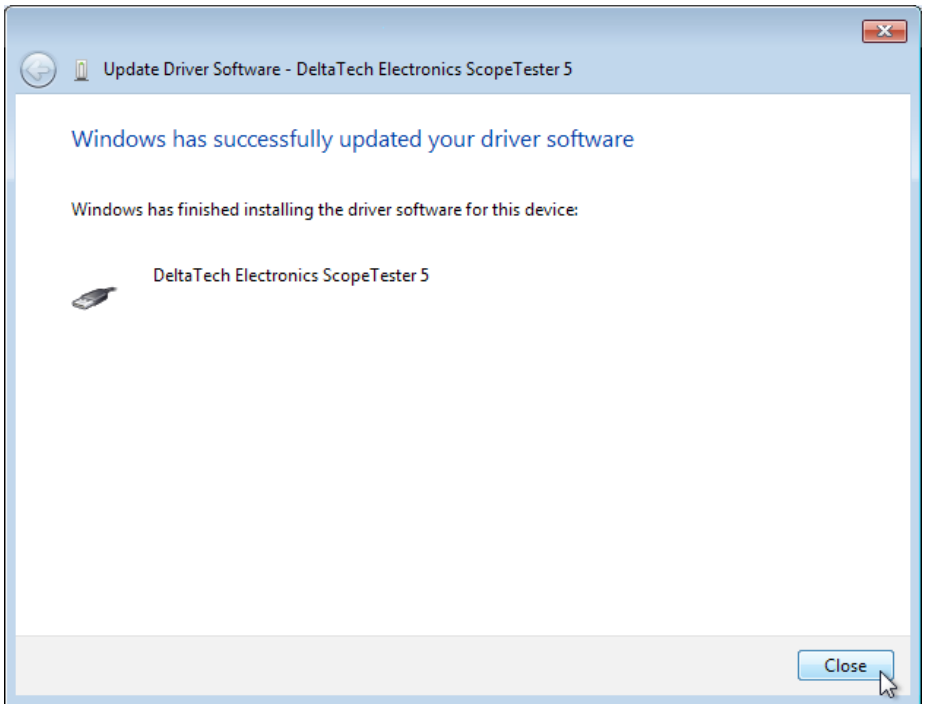
Select *Driver* folder on the installation CD-ROM (drive letter may differ) and click *Next*

The system will display untrusted publisher warning:



Select *Install this driver software anyway.*

After a while installation should be completed:



3.3. Driver installation (Windows 8 / 8.1 / 10)

To install driver properly in Windows 8 and higher, it is necessary to start the computer in special mode.
Perform the following steps:

1. Display power options:
   - Windows 8/8.1: Move cursor over the top or bottom right corer of the screen and the Charm Bar will appear. Click *Settings* (gear icon) and then click *Power*.
   - Windows 10: Click *Menu Start* and then *Power*.
2. While holding *SHIFT* key click *Restart* button.
3. When an option screen will display, click *Troubleshoot*, then *Advanced options*, and then, *Startup settings*.
4. The system will display list of options available. Click *Restart*.
5. System will restart into startup settings mode. On the list displayed select number 7 (Disable driver signature enforcement) by pressing F7 key.

After performing all the steps run Device manager. The fastest way to do this is to press *WinKey* + *X* and select *Device manager*.

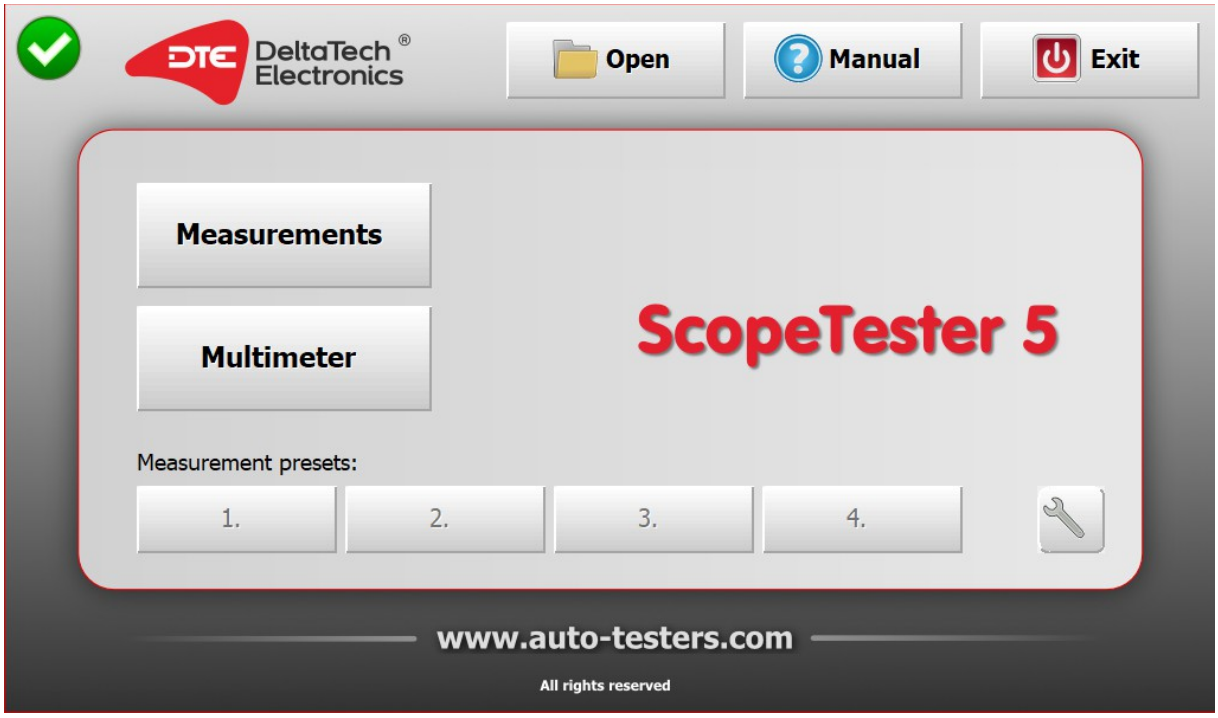
After opening device manager proceed as in Windows 7 (see previous section of this Manual).

4. Device operation

The device is powered directly from USB port and therefore does not require additional power supply

Before running the program and making any measurements it is recommended to close all unnecessary applications.

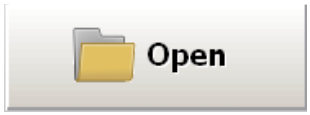
After starting ScopeTester 5 the main window will appear:



During program operation in the upper left corner of the window there is an indicator showing device connection status.

Indicates correct connection. The ScopeTester-5 device is ready to transmit data.

Indicates no connection. Check whether the device is correctly connected to the USB port (the POWER indicator should light up) and the drivers are properly installed. If the problem persists – disconnect and reconnect the device.

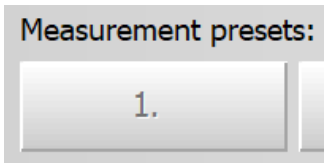


Enables opening the recorded waveform saved to file. There are three filetypes available corresponding to three operating modes.

Opens this manual in PDF format (Adobe Reader required).

Closes application.

Displays measurement window.

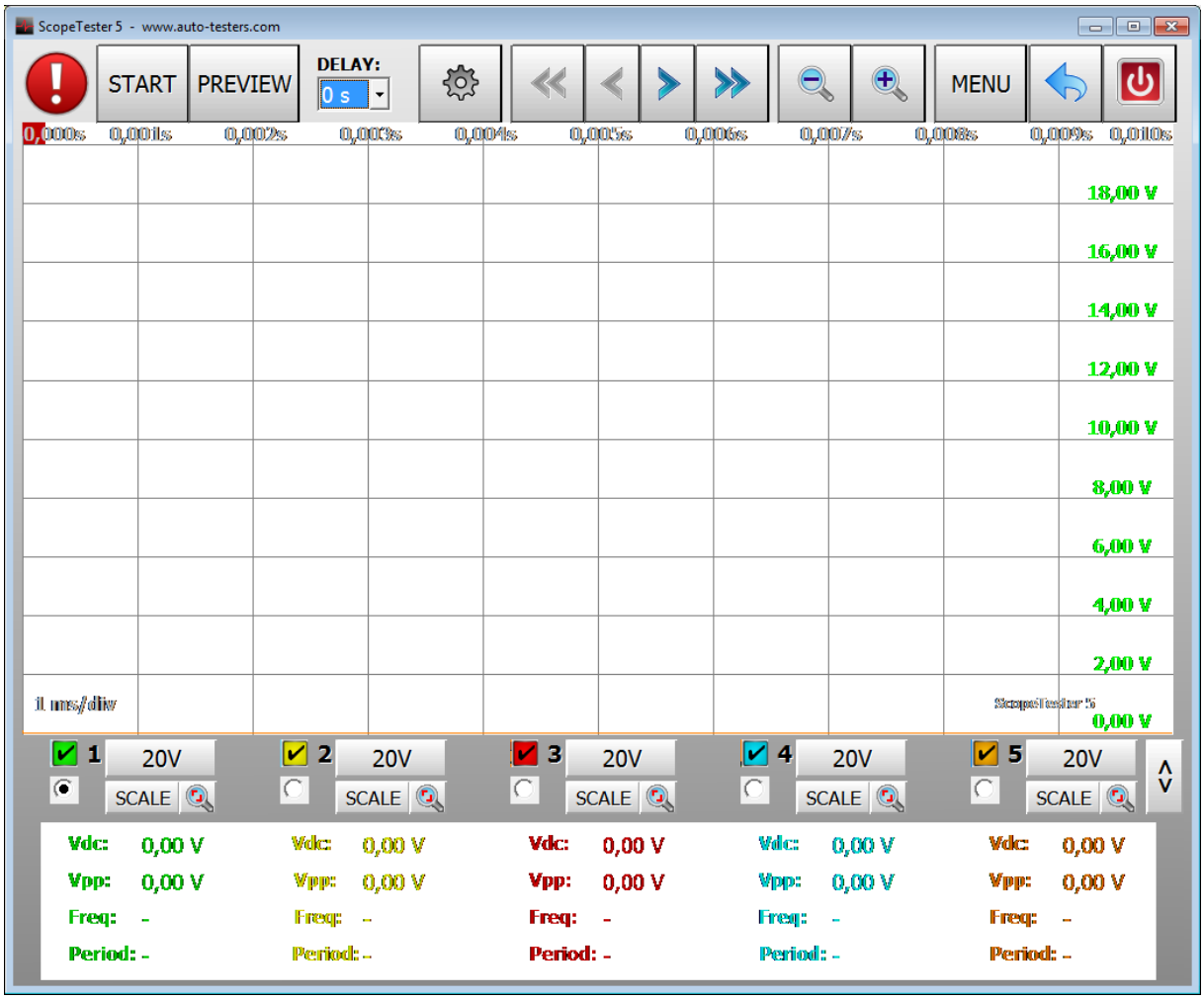


It allows you to open one of the four measurement presets - ready channel and sampling settings. The buttons remain inactive until the template is saved.

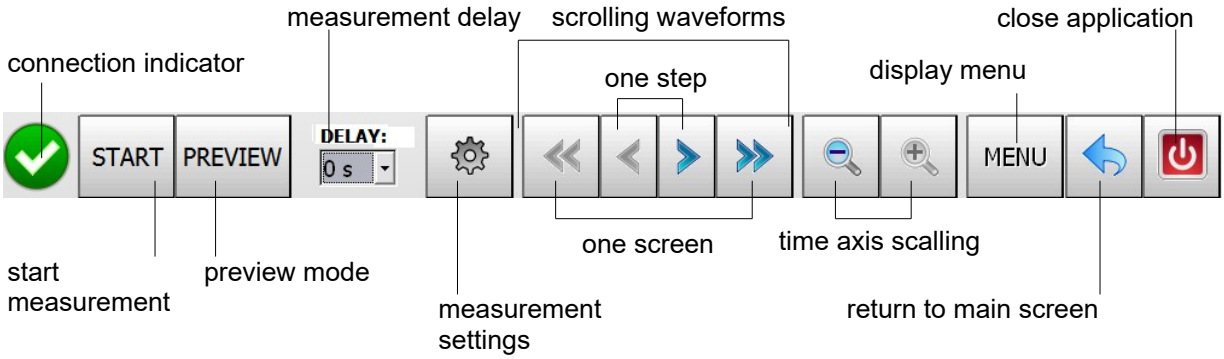
Setting button in the main window enables specifying the following data:

- default folder (for saving measurement data)
- workshop information

Clicking measurement button will start measurement mode and display the following window as shown below:



Below there is a description of individual window items:



Start – pressing this button will begin waveform acquisition. If the delay is selected, the measurement will start automatically after countdown. If waveforms currently displayed were not saved, the program will warn the user before overwriting the data.

Preview – preview mode allows acquiring single screen of waveforms in continuous mode.

Delay – adds the given delay before starting the measurement. This option is useful when the user needs to perform other task before starting the measurement, such as preparing to start the engine.

Scrolling – enables to scroll through the waveforms. Holding the button will cause repeating action.

Measurement settings – his opens the window that allows to set number of recorded channels (1, 2 or 5), time base (associated with the real sampling rate) and recording duration. List of available measurement times depends on number of channels and time base selection.

Time axis scaling – these buttons are used to scale time axis as displayed on the graph.

MENU – displays a list of available options.
List of menu items:

- **Open** - opens a file with measurement data. The file selection window will appear. Select the file to be opened and click *Open*.

- **Save** - allows you to save the measurement data to a file. A standard window for saving the file to the default location will be displayed. After changing the location and entering the file name, click *Save*.

- **Comment** – allows you to add or display a comment that will be attached to the file. In addition to the comment, you can also indicate vehicle data that will be both attached to the file and visible on the printouts.

- **Open Reference** - allows you to open a pattern file (details in section 4.1.1 of the Manual).

- **Remove Reference** – removes the previously added reference.

- **Save Preset –** allows you to save the settings of channels, sampling, etc. to speed up subsequent measurements.

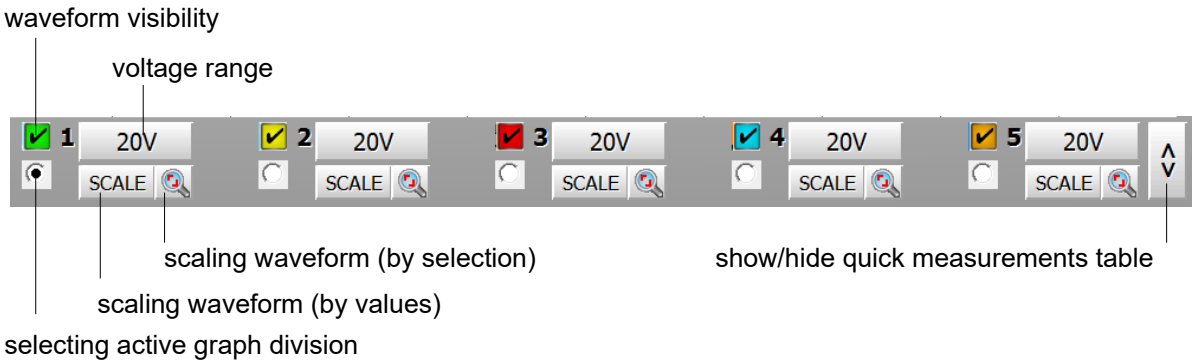
- **Save Screen (bitmap)** – saves the image (bitmap) of the program window with the graph. After selecting this option, the standard file saving window will be displayed. The files will be saved in BMP format.

- **Print** – allows you to print waveforms. When you click in place of the Print button, the *Black & White*, *Color*, and *Cancel* buttons appear. When you click *Black and White* or *Color*, the print dialog will appear. After clicking the *OK* button, the program window view with the diagram will be printed.

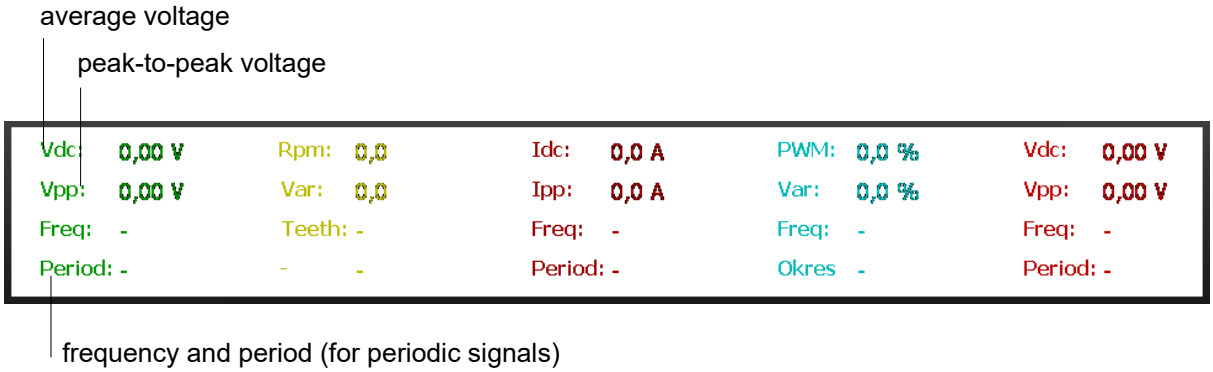
- **Measurements** – this option allows you to measure the values on the graph with markers moved by the mouse. Measured values refer to the currently selected channel.

To turn off the sliders, click *MENU-> Measurements* again.

Lower part of window contains a channel configuration bar:



Below, there is quick measurements table that gives basic information on measured signals.



To change location of the table (in the lower part of window or on top of waveform) or to hide it use  button, subsequent clicks will go throught available options.

Warning !!!

The device is covered by 12 month limited warranty. The warranty do not cover any damage caused by incorrect use.

DeltaTech Electronics Company has do their most in order to write this manual properly, but can not guarantee that it does not contain any errors.
During any workshop activities please always refer to vehicle service manuals, local regulations and laws, workplace and fire safety rules.